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Descriptions of new American SQUAMATA, in the Museum of the Smithsonian Institution, Washington.

BY E. D. COPE.

Tantilla miniator Cope, sp. nov.

Tail one-fifth the total length. Postnasal equal to second superior labial, and largely in contact with the preocular; which is hexagonal, and as long as high. Two post-oculars; seven superior labials, eye over third and fourth; fifth very narrow. First inferior labial not separating symphyseal and genieals. Temporals two large, two small. Occipitals rather large; vertical, scarcely longer than broad, more acute angled posteriorly, the frontal, superciliary and occipital sutures equal. Muzzle subtruncate. Scales in thirteen rows. Length of head and body 30'', of tail 7''.

Above blackish brown, on the nape blackish; a yellow collar two scales wide, touching tips of occipitals; head above blackish, except two large yellowish spots on the superior labials, one below the nares, and one behind the eye. Under surfaces salmon-colored, palest anteriorly.

Habitat.—Mirador, near Vera Cruz. From Dr. Charles Sartorius' collection made for the Smithsonian Institution. (No. 13.)

A species allied to *coronata* Bd. Grd., (which Jan confounds with the *melanocephala*), but differing in the broader and more obtuse head, and darker coloration. The *reticulata* has a much longer tail.

Tropidodipsas sartorii Cope, sp. nov.

Rather stout; tail one-sixth of the total length. Head swollen at the temples, muzzle broad, thick; eyes medium. Rostral not prominent, as high as broad. Nasals two, large; loreal nearly square, in contact with orbit; one very small preocular above it, widely separated from vertical; two postoculars. Top of head arched, a little swollen behind. Postfrontals very large; vertical broader than long, five-sided; superciliaries small. Occipitals with a concave outer border. Five temporals, one in contact with postoculars, little longer than fifth superior labial. Six superior labials, eye over fourth, but touching third. Nine inferior labials, fifth largest; two pairs of very small genieals behind the moderate anterior pair. Scales in seventeen longitudinal series, the three median slightly keeled. Gastrosteges rounded, slightly bent upwards on the sides. Length of head and body 47'', of tail 9''.

Black, with fifteen yellowish (? red) rings three scales wide, each scale black tipped. Last ring including tips of occipitals, last superior labial, and chin, except inferior labials; five light rings on tail.

Habitat.—Mirador, Vera Cruz. Discovered by Dr. Charles Sartorius, (Coll. No. 20,) to whom the species is dedicated. This gentleman has also obtained at the same place, among other species, *Ninia collaris* (*Streptophorus sebae, collaris* Jan.) *Drymobius margaritiferus*, *Lampropeltis micropholis*, *Boa eques*.

Rhadinæa poecilopogon Cope, sp. nov.

Slender; head distinct elongate, convex; muzzle elongate, narrowly rounded. Scales narrow, in seventeen longitudinal rows. Tail more than one fourth of the total length. Superior head-plates normal, elongate, especially the vertical, which has straight outlines. Loreal nearly equilateral, encroaching on the single preocular, which does not reach the vertical. Two postoculars, superior larger; one temporal between fifth and sixth superior labials and occipital. Seven superior labials, eye cover third and fourth; postgenieals longer than pregenieals; nine inferior labials, fifth largest. Total length 39 $\frac{3}{4}$ '', tail 10 $\frac{3}{4}$ ''.

Above olivaceous brown, each scale of the vertebral series with a black centre. End of gastrosteges and lateral scales to the edge of the fourth row, dark slate; a streak across the rostral plate through loreal and temporal re-

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gion, and spreading in the posterior lower labials of the same color, yellow bordered above. Labials, mental and gular regions yellow, with blackish spots and vermiculations. A blackish spot on each end of every gastrostege anteriorly; posteriorly they become confluent with those of the sides. Abdomen yellow, immaculate.

Habitat.—Paysondu, Uruguay. Mus. Smithsonian, from Mr. H. W. Kennedy.

The genus here called *Rhadinæa*, has afforded me considerable perplexity, standing as it does in near relationship with *Coniophanes*, *Coronella*, *Lygophis*, and *Diadophis*. Its type is the *Tæniophis vermiculaticeps*, which I indicated in 1861* as belonging to an unnamed genus. *Coronella decorata* Gthr., is a second species. This I formerly placed provisionally in *Diadophis*, partly on account of its two preocular plates. A specimen from Vera Cruz, has, however, but one, and the dentition is not isodont, but syncranterian, as Günther describes, though of a weak type. The same arrangement is exhibited by the *vermiculaticeps* and *poecilopogon*. The tail of the *decoratus* is relatively much longer than that of the *vermiculaticeps*; the *poecilopogon* is rather intermediate in this respect. The dentition distinguishes this genus from *Coniophanes*; the pattern of coloration is the same, and the scale pores are equally wanting. The general form is rather more slender. If we ignore the difference in dentition, these serpents might be referred to *Lygophis*, where some species are of similar scutellation, proportion, and coloration. The closest accordance with *Coronella* in structural characteristics exists, but the species are much more slender, and the head is more distinct. If we unite them with that genus, *Coniophanes*, its closest ally (through *C. imperialis*) must follow, and if so, then *Lygophis* and *Liophis*, whose connection with *Dromicus* is well known. *Coronella anomala* is probably *Lygophis rutilus*, with abnormal scutellation, and the dentition described. as syncranterian; it seems to be diacranterian in the specimens described under the last name; other specimens have or have not the interval anterior to the last long tooth. Whether this species is a *Lygophis* or a *Rhadinæa*, or whether it renders the two inseparable, must be left at present to future investigation. Its form is more slender than *Coronella*.

If *Coronella*, as Günther left it in his "Catalogue," could be defined trenchantly from genera leading to such distant connections, it would be well to accept it; but to me it is a union of natural groups, which, as being the most definable, may be called genera. They are *Coronella* proper, *Macroprotodon*†, *Coniophanes*, *Rhadinæa*, *Lampropeltis*, and perhaps others.

In the system of the *Erpetologie Générale*, the species of *Rhadinæa* would enter the section of *Leptophis*, characterized by smooth scales.

Rhadinæa obtusa, Cope, sp. nov.

Muzzle broadly rounded, rather short. Head small. Tail one-fourth the total length. Head plates shorter than in the *poecilopogon*; outlines of vertical slightly concave. Eight superior labials, loreal nearly square, encroaching on the single preocular, which does not reach the vertical. Two postoculars touching one temporal. Scales in nineteen longitudinal rows. Total length 41.25", the tail 8.75."

Above olive brown; ends of gastrosteges and sides, including border of fifth row of scales, blackish; a median dorsal band embracing one and two half rows of scales, which disappear on the tail. Beneath saffron yellow; a blackish dot on the end of each gastrostege anteriorly. Chin and labial regions immaculate.

Habitat.—Paysondu, Uruguay. Dr. Kennedy's collection furnished also that rare species *Tomodon ocellatus*. This serpent looks much like a *Tachy-*

* Proc. A. N. S., p. 74.

† It would prove interesting if the *Coronella brevis* Gthr., should be found to possess the elongate anterior mandibular teeth of *Macroprotodon*.

menis, and resembles that figured by Seba, pl 68, no. 6, on which Klein (Tentamen, p. 39.) founded his *Coluber exetra, aquaticus*. There were also in the collection *Lygophis anomalus*, *Heterodon d'orbigny* (ground color of abdomen and tail red!). *Philodryas schottii*, *Oxyrhopus spadiceus*, *plumbeus*, *Opheomorphus dolatus*.

Gonatodes gillii Cope, sp. nov.

Premaxillary teeth eleven. Inferior labials four; symphyseal thrice as large as the anterior labial, longer than broad, each of its two posterior sutures shorter than its lateral, and joining at an obtuse angle. Six scales in the first transverse mental row, two median in contact with symphyseal; behind these about four rows of hexagonal scales, becoming smaller and more circular. Superior labials five. Internasals separated by one row of scales. Frontal scales larger than gular, much larger than dorsal, which equal occipital. Scales of abdomen and anterior faces of limbs larger, rounded, imbricate; of tail large, hexagonal; a row of plates beneath. Length from muzzle to vent 3".

Lateral regions bluish grey, sides of abdomen much darker. Dorsal region nearly black, with a median yellow vitta extending from the end of the muzzle.

Habitat.—Trinidad. From the collection of the well-known zoologist, Prof. Theodore Gill, whose name I take much pleasure in attaching to this very pretty species.

I have employed Fitzinger's name for this genus, instead of *Goniodactylus* of Kuhl, which should be applied to that called *Cyrtodactylus* by Gray.

Gonatodes ferrugineus Cope sp. nov.

Premaxillary teeth eleven. Inferior labials five; superior six or seven. Symphyseal as broad as long, twice as large as anterior labial. Two large scales in first mental row, five in the second, five rows behind these gradually diminishing in size. About thirteen longitudinal rows of scales on the thorax. Scales of the upper surfaces very small, those of the front large. Length from muzzle to vent 3".

Color cinnamon; the thorax and abdomen dirty white, the gular region mottled with the same.

Habitat.—Trinidad. Prof. Gill's Collection.

The head of this species is rather narrower than that of the *gillii*, and the squamation of the superior surfaces more minute.

Diplodactylus unctus Cope, sp. nov.

Scales rounded, flat in about 36 rows on the dorsal region; those of the muzzle smaller than dorsal, little larger than those on the occiput. Internasals in contact. Seven superior labials, including that under the pupil; six inferior, to the same point,—the last two very small, the first larger than the second, extensively in contact with the first pair of mental plates, which bound the symphyseal posteriorly. Each of the former is bounded by three smaller, and these are succeeded by a few rows which diminish in size. Terminal discs with straight outlines. Tail without tubercles. Anal scales similar to the abdominal. Auricular opening as long as pupil. Premaxillary teeth five. Length from end of muzzle to auricular meatus 12", from the same point to vent 4.5".

Above grey, shining, with five broad, blackish, centrally-pale cross-bands, from base of tail to interscapular region. A dark band from the muzzle through the eye, a cross band on occiput, and various irregular spots on the top of head and labial regions.

Habitat.—Cape St. Lucas, Lower California. Sent to the Smithsonian Institution by John Xantus, Esq. (No. 5304.)

Phyllodactylus xanti Cope, sp. nov.

Dorsal tubercles rather small, not trihedral, in very irregular, broken, lon-

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gitudinal series. Those on the occiput small, numerous, smaller than the scales of the front and region of the canthus rostralis, which are swollen, and as large as those of the abdomen. Gular scales minute. Symphyseal acute-angled posteriorly, bounded by the two oval, large mentals; each of these bounded by three posteriorly. Five inferior labials opposite the middle of the orbit; first and second equal. Seven superior labials to the same point. Internasals in contact. Preanals like abdominals. Transverse series of keeled ovate tubercles on the tail, which are in contact or separated by one row of scales. A row of broad plates beneath.

Length from muzzle to angle of ramus mandibuli 1.4'', to vent 5''. From vent to end of tail 4''.

In spirits gray, with five blackish cross-bands, the median line pale, continuous. A narrow streak through loreal and temporal regions, a cross streak on occiput, and a few longitudinal lines on the head. Tail with seven blackish rings.

Habitat.—Cape St. Lucas, Lower California. Obtained by John Xantus, Esq., to whom it is dedicated.

Pantodactylus bivittatus Cope, sp. nov.

Internasal pentagonal, as broad as long. Anterior supraorbital largest, not equal to the two others combined; the latter are as large as the frontoparietals. Interoccipital larger than occipital, bounded behind by a small post-interoccipital and two larger postoccipitals; one or two large temporals. Nasal subtriangular, nostril on the middle. Loreal much higher than long; seven superior labials, eye over fourth. Four narrow inferior labials. One postsymphyseal, four infralabials, the two anterior pairs in contact. The anterior pair of gulars in contact, the four succeeding separated by from one to three plates, the following six in contact, transverse, the posterior forming the edge of a collar. Four rows of abdominal plates, as broad as long, two of ovate, smooth laterals, eighteen of elongate sharply-keeled dorsals. The extended posterior extremity reaches the elbow of the appressed anterior. Five femoral pores, four large anals, the posterior twice as long as the anterior. Tail more than twice the length of the head and body. Total length 11.7'', tail 8.2.

Above olive brown; two yellowish brown bands from the temporal region, bounded with darker above and below; in one specimen a median blackish line. Below olivaceous yellow, olive spotted under the tail.

Habitat.—Paysondu, Uruguay, whence Mr. H. W. Kennedy has sent it to the Smithsonian Institution, Washington. This species possesses a transparent inferior palpebra like that of the concolor. (vid. Tschudi, "Die Familie der Ecleopoda"), while in the orbigny i it is squamous.

Cnemidophorus hyperythrus Cope, sp. nov.

External nares in the nasal plate. Brachium with four series of plates, three on the antebrachium, the superior largest. Head rather narrow, muzzle long. Hind foot two-fifths the length of the head and body. Three rows of scales on the gular fold, the anterior row median, short, scales of the posterior largest. Posterior gular scales small, abruptly separated from the anterior, which are large—the median twice the size of those surrounding. Supraocular plates four, rarely three. Abdominals in eight series—sometimes additional small external plates. Frontoparietals united. Three larger anals.

From end of muzzle to collar, 1'' 8'''; from collar to vent 4''; vent to end of tail 14''.

Above brown or blackish; two (?) yellow bands on each side, which extend some distance on the tail, one from the superciliary margin, one from inferior border of orbit; the last bordered with blackish beneath, and extending on the posterior extremity to the foot; the caudal portion continued from a 1863.]

similar band on the posterior face of the limb. A median light stripe between these two. Two paler median dorsal bands which diverge on the nape, and are frequently united for most of their length. Beneath iridescent rose-color, deeper posteriorly, becoming brownish vermillion on the under surface of the tail.

Habitat.—Cape St. Lucas. From coll. of Jno. Xantus, Esq., (No. 5290). A species allied to the *deppii* Wiegman in scutellation; the latter has two frontoparietals three supraoculars, is stouter, and more numerous banded.

Cnemidophorus maximus Cope, sp. nov.

Plates of the collar graduating in the posterior gular, the marginal largest, the series concave anteriorly in the middle. Anterior gulars abruptly larger, their median largest. Nostril in naso-rostral; supraorbitals four, frontoparietals separated. Interoccipital (in adult) nearly as broad as long; occipitals large. Preanals in four transverse series, the posterior two containing six. Tibials four, femorals seven, abdominals eight, antebrachials (often an unreliable character) four, brachials seven rowed. Dorsal scales minute.

Length from end of muzzle to gular fold 4''; from gular fold to vent 8''; from vent to end of tail 22''.

Above olive brown, with three brown bands on each side, which are as wide as the intervals between them, and are so broken by spots of the ground-color as to resemble series of confluent brown variations. Posterior extremities coarsely reticulate with the same color. Superior surface of tail, and gular region, blackish, varied; abdominal shields black tipped. Under surface of tail and hinder extremities yellow.

Habitat.—Cape St. Lucas. Jno. Xantus. (Smith. Mus., No. 5297).

Differs from the *C. grahamii*, its nearest ally, in its smaller and more numerous preanal plates, much smaller dorsal scales, and broader light bands.

Cnemidophorus melanostethus Cope, sp. nov.

Plates of the collar small, the marginal not the largest; posterior gulars graduating into the anterior, not abruptly separated from them; the median of the latter not abruptly larger than those around them. Nostril in the frontonasal plate, as in all other North American species. Four supraorbitals, two frontoparietals; interparietal elongate. Sides of neck with many folds. Scales of the back flat, rather large. Five large anals, two of which are marginal. Hind foot entering length of head and body three times; extended, reaching angle of the mouth. Eight series of abdominal scales. Length from muzzle to collar 3''; collar to vent 6'', 3'''; vent to end of tail 27''.

Above olive brown, with numerous whitish spots arranged closely in irregular transverse series, producing a reticulate aspect. Thorax and terminal two-thirds of tail, black; abdomen slightly, gular region strongly shaded with the same.

Habitat.—Region of the Colorado of California. Mus. Smithsonian, (3064 a); obtained by Mr. H. B. Möllhausen, of Lieut. J. C. Ives' expedition which explored that river.

This species has a shorter hind foot than the *gracilis*, (where it enters the length of the head and body two and a half times,) and does not exhibit that abrupt transition from the small posterior to the large anterior gular plates. The latter character separates it from *tesselatus* and *tigris*. In the former of these the dorsal scales are larger; in the last, the coloration is very different.

Uta thalassina Cope, sp. nov.

Form much depressed. Median dorsal scales larger, smooth, graduating into the lateral, smaller than those of the abdomen, not separated by median smaller ones. Abdominal scales nearly rectangular, in transverse series. Brachial scales a little larger, more imbricate, keeled. Occipital plate large,

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longer than broad, triangular, with rounded angles, separated by two plates from those bounding supraorbital region. One series of interorbitals. Supraoculars in three series, five in the interior largest. Internasals, two series of four, each followed by two pairs. Scales of the collar but little larger than those anterior; gular scales equal. A narrow entire suborbital. Eight superior labials, bounded above by two series of similar plates. Eight oblong inferior labials. Symphyseal larger, followed by two trapezoid infralabials. A scapuloinguinal dermal fold on each side. Extended posterior extremity reaching anterior border of ear orifice. Tail broad and depressed at base, slender and slightly compressed, less than twice the length of the head and body. Total length, 21'' 4'''; tail 13'' 6'''; body 5'' 5'''; from collar to end of muzzle, 2'' 3'''.

Color above sea-green; a narrow black cross-band separates the nuchal from the dorsal region; a broader black band, which presents a convexity anteriorly, crosses the latter anterior to its middle. Between these, some indistinct undulatory bands, three similar on the posterior dorsal region, followed by numerous caudal annuli, which become very broad. Beneath, bluish green, darkest on the gular region; tail and femora beneath yellow.

Habitat.—Cape St. Lucas. From Mr. Xantus' valuable collections. Smithsonian, No. 5302.

Sceloporus zosteromus Cope, sp. nov.

Scales large, strongly keeled, slightly denticulate, in ten longitudinal rows on rump and nape, and eighteen to twenty transverse between those points. Lateral scales larger than abdominal, not granular above and before shoulder. Auricular scales much longer than those adjacent. Cephalic shields smooth; prefrontal longer than broad, single; supraoculars in one series, transverse, posteriorly in immediate contact with superciliary series. Abdominal scales emarginate, accumulated on the posterior gular region, where many are tricuspid. Hind limb extended, reaching orbit.

Length from muzzle to vent, 9'' 7'''; from muzzle to axilla, 4'' 3'''; hind foot, 3''.

♂ Above bright olivaceous, with a reddish longitudinal dorsolateral band on each side, crossed medially by numerous indistinct brown bars,—often obsolete. Under surface and sides of tail yellowish. Anterior face of femur, groin, a large spot anterior to brachium, a broad band connecting the latter with the former, and the latter of each side, across posterior gular region, black, which shade into blue on the sides and throat. Chin light-green. Brachium black in front. In younger specimens the prebrachial spot often does not connect with the lateral abdominal band.

Habitat.—Cape St. Lucas. From the collection of Jno. Xantus, Esq.

A species to be compared with the *S. clarkii*, which is found in Texas and Arizona. The latter has a shorter prefrontal plate, greater size, and different coloration.

Cyclura (Ctenosaura) hemilopha Cope, sp. nov.

Ctenosaura sp., Baird, Proc. A. N. S., 1859, p. 300.

Breadth just anterior to orbits equal to length from line connecting those points to end of muzzle. Rostral plate twice as broad as high, upper outline an arc. Seven premaxillary teeth; maxillaries (in one specimen) 21, of which six are conic, the third longest, and very few of the remainder more than tricuspid. Crest highest on the nape, where it is composed of high compressed processes; on the anterior fourth of the back they become reduced to a median series of compressed scales, which are undistinguishable behind the middle of the back. Dorsal scales flat; tibials and antebrachials slightly keeled. Tail cylindrical, the whorls with very strong spines, separated by one series of scales. Foot short, sole not spinous. Length from end of muzzle to gular fold, 6'' 5'''; from mastoid to mastoid, 3''; from edge of 1863.]

fold to vent, 17'' 5''' ; vent to end of tail, 33'' ; posterior extremity, 13'' 4''' . Above, light-greyish olive, with or without some transverse yellowish shades. Three or four black blotches cross the crest, the anterior smallest, the second also only a spot, but larger, the third transverse, the last largest, extending behind the axillar round the thorax, which, with the gular region and anterior extremities, is also black. A black line on each side the nape. Posteriorly pale, vermiculated and speckled with black, the hinder extremities coarsely. Abdomen olivaceous grey or yellow, sparsely speckled. Tail yellowish-brown, with broad brown annuli posteriorly.

Habitat.—Cape St. Lucas. One of the most interesting discoveries of Mr. Xantus, (Xantus Col., No. 789.) This very distinct species belongs to the same section as *C. teres* and *C. pectinata*. Its remarkably short crest and peculiar coloration are distinguishing features which immediately strike the eye.

Descriptions of New Species of Birds of the Families VIREONIDÆ and RALLIDÆ.

BY GEO. N. LAWRENCE.

Fam. VIREONIDÆ.

1. *VIREOSYLVIA ATRIPENNIS*.

First primary absent, third and fourth equal and longest, fifth nearly as long, second and sixth shorter and equal.

Upper plumage olive-green, brownish on the crown of the head ; a broad line of greyish-olive runs from the bill over and beyond the eye ; under this line is a blackish mark, occupying the lores and a space behind the eye, including the eyelids ; cheeks greyish-olive, bordered by a well-defined blackish line, running from the lower mandible down the side of the neck ; tail greyish-black, broadly margined on the outer webs above with olive-green, and with the inner webs underneath edged with pale yellowish-white ; quills black, edged with olive-green ; under wing coverts pale yellowish white, inner margins of quills greyish-white ; throat greyish-white ; breast and abdomen pale yellowish-white, olivaceous on the sides ; under tail coverts pale yellowish-white ; upper mandible dark horn-color, the under paler ; tarsi and feet black. Length of skin $6\frac{3}{4}$ in. ; wing $3\frac{3}{16}$; tail $2\frac{3}{8}$; bill $\frac{5}{8}$; tarsi $\frac{3}{4}$.

Habitat.—Sombrero Island, W. I.

It somewhat resembles *V. altiloqua*, but is apparently a stouter species, the bill is rather larger and stronger, although not so broad at the base, the throat is grey instead of white, but the most distinguishing character is the black quill feathers.

This species was the only land bird in a small collection put in my hands for examination by Prof. C. A. Joy, of Columbia College, N. Y. These birds were collected by Mr. Alexis A. Julien, on the Guano Island of Sombrero, one of the easternmost of the group, known as the Virgin Isles. I expect to receive from him a more extended series of the birds inhabiting that island, and to give a catalogue of them, should they prove of sufficient interest.

Fam. RALLIDÆ.

2. *CORETHRURA GAUTEMALENSIS*.

Adult.—Upper plumage brownish-rufous, brighter on the wings, and more brown on the head ; tail dark rufous-brown ; quills dark liver-brown, with faint edgings of rufous ; the under plumage is of a deeper and brighter brownish-rufous, lighter on the chin ; sides dusky ; under wing coverts dusky-brown ; bill dark horn-color, pale at the end ; the legs appear to have been flesh-color.

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